

What is claimed is.

[1] A treatment process of a solution containing an organic compound having a fluorocarbon chain (hereinafter said to as the fluorine compound), the process comprising,
adding divalent and trivalent metal salts to said solution,
forming a layered double hydroxide having the fluorine compound between layers to absorb and fix the fluorine compound.

[2] A treatment process of a solution containing the fluorine compound, the process comprising,
adding divalent and trivalent metal salts to said solution,
precipitating a layered double hydroxide having the fluorine compound between layers,
separating a solid part by the solid-liquid separation,
dissolving said separated solid part in an acid, and
separating the fluorine compound or its salt.

[3] The treatment process of the solution containing the fluorine compound according to claims [1] or [2], the process further comprising,
adjusting pH of the solution to more than 4,
precipitating the layered double hydroxide having the fluorine compound between layers.

[4] The treatment process of the solution containing the fluorine compound according to claims [1] or [2], the process further comprising,
adding an alkali to the solution to adjust pH from 4 to 12,
adding divalent and trivalent metal salts to said solution
precipitating the layered double hydroxide having the fluorine compound

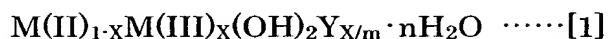
between layers.

[5] The treatment process of the solution containing the fluorine compound according to any one of claims [1] to [4], wherein the divalent metal salt is a salt of magnesium, calcium, zinc, nickel, copper, manganese (divalent), or cobalt (divalent), and the trivalent metal salt is a salt of aluminum, iron, chromium, manganese (trivalent), cobalt (trivalent), potassium, lanthanum, or scandium.

[6] The treatment process of the solution containing the fluorine compound according to any one of claims [1] to [5], wherein the divalent and the trivalent metal salts are chlorides.

[7] The treatment process of the solution containing the fluorine compound according to any one of claims [1] to [6], wherein the fluorine compound is carboxylic acid or sulfonic acid having the fluorocarbon chain, in which the number of carbon is more than 5.

[8] The treatment process of the solution containing the fluorine compound according to any one of claims [1] to [7], wherein the layered double hydroxide having the fluorine compound between layers is shown in the following formula [1].



where, Y is an anion having valence number m of the fluorine compound having the fluorocarbon chain, M(II) is a divalent metal ion, M(III) is a trivalent metal ion, X is 0.1 to 0.5, and n is 0 or positive integer.

[9] A treatment process for recovering the fluorine compound and its salts, the process comprising, precipitating the layered double hydroxide by the treatment process

[10] A treatment process for recovering a fluorine compound and its salts, the process comprising,
precipitating the layered double hydroxide by the treatment process according to any one of claims [1] to [7],
recovering the solid part by the solid-liquid separation,
dispersing the recovered solid part to an organic solvent, and
filtering an insoluble part from said solvent.

[11] A layered double hydroxide shown by above-mentioned formula [1], which contains the fluorine compound between layers and is formed by adding the divalent and trivalent metal salts to the solution containing the fluorine compound having the fluorocarbon chain.